

t11_xxreal_1

(TMMF5YQ596bBEhFLzR3AcAJVMeVT5tf1LQQ)

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Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k3_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_numbers : \iota$ be given. Assume the following.

$$\forall X0. \forall X1. (v1_xxreal_0 X1) \Rightarrow (\forall X2. (v1_xxreal_0 X2) \Rightarrow (\neg (X0 \in k1_xxreal_1 X1 X2) \wedge ((\neg X0 \in k2_xxreal_1 X1 X2) \wedge (X0 \neq X2)))) \quad (1)$$

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow (\forall X2. (v1_xxreal_0 X2) \Rightarrow ((X0 \in k1_xxreal_1 X1 X2) \Leftrightarrow ((r1_xxreal_0 X1 X0) \wedge (r1_xxreal_0 X0 X2)))))) \quad (2)$$

Assume the following.

$$\forall X0. (v1_xxreal_0 X0) \Rightarrow (\forall X1. (v1_xxreal_0 X1) \Rightarrow (k3_xxreal_1 X0 X1 = \text{ReplSep}(\text{toset}(\lambda X2 : \iota. m1_subset_1 X2 k7_numbers)) (\lambda X2 : \iota. (\neg r1_xxreal_0 X2 X0) \wedge (r1_xxreal_0 X2 X1)) (\lambda X2 : \iota. X2)))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_xxreal_0 X0) \wedge (v1_xxreal_0 X1)) \Rightarrow ((r1_xxreal_0 X0 X1) \vee (r1_xxreal_0 X1 X0)) \quad (4)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k7_numbers) \Rightarrow (v1_xxreal_0 X0) \quad (5)$$

Theorem 1

$$\forall X0. \forall X1. (v1_xxreal_0 X1) \Rightarrow (\forall X2. (v1_xxreal_0 X2) \Rightarrow (\neg (X0 \in k3_xxreal_1 X1 X2) \wedge ((\neg (X0 \in k2_xxreal_1 X1 X2) \wedge (X0 \neq X1)) \wedge (X0 \neq X2))))$$